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EXAMINER
POPOVICS,R

D3M1/1029

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ART UNIT	PAPER NUMBER
1308	13

DATE MAILED: 10/29/93

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 8/23/93 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire THREE month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-11 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-11 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

I. The disclosure is objected to because of the following informalities: "radiused" as recited on page 4 appears to be incorrect. Appropriate correction is required.

II. Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear what is meant by "to exert" at line 16 and by "medial" at line 17.

III. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-3, and 8-9 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson (US 3,741,389).

Bratten discloses a filtering apparatus substantially as claimed. Claims 1 and 3 differ from Bratten by reciting:

"a continuous loop of a woven fabric porous permanent filter media belt, including a segment down said rear wall and passing along said tank bottom over said perforate section to an exit point at the end of said tank opposite said rear wall;

guide means guiding said continuous permanent media belt out of said tank at a side opposite said rear wall, beneath said tank bottom, up outside of said rear wall and back into said tank;"

and

"said chain conveyor loops drivingly engaging segments of said permanent filter media belt by frictional contact to advance said segments with said chain conveyor segments during indexing thereof."

Estabrook discloses a similar filter which employs a conveyor 25 (see figures 1&6) which comprises an endless (permanent) Cambridge belt (see col. 3, lines 5-25). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the apparatus of Bratten by employing a Cambridge belt in order to support and better move the (disposable) media belt 22 (fig. 1 of Bratten).

Anderson discloses a similar filtering apparatus which employs an endless supporting screen 16 (see fig. 1) which follows a path around the filtering tank 11 (see

fig. 1). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Bratten by situating the Cambridge belt external of the tank, as disclosed, in order to facilitate inspection and maintenance of the belt and associated components.

The "woven fabric" limitation introduced by the last amendment is considered an obvious matter of choice in design to one having ordinary skill in the art. As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of the references as applied above by using a woven fabric in place of the Cambridge belt to address particular filtering applications, as well known to those skilled in the art.

IV. Claims 4-7 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson as applied to claims 1-3 and 8-9 above, and further in view of Ishigaki.

Claim 4 differs from the references as applied above by reciting: "further including a scraper edge inclined to scrape the lower surface of said permanent filter media belt."

Claim 5 differs from the references as applied above by reciting: "further including a trough beneath said tank, said belt guide means causing said permanent filter media belt to be looped within said trough, and wash jet means directly washing jets from the upper surface of said belt in said trough."

Claim 6 differs from the references as applied above by specifying that the "scraper edge to slants down and away from the lower surface of said permanent filter media belt."

Claim 7 differs from the references as applied above by specifying that the "scraper edge is affixed to said collection trough."

Ishigaki discloses a similar filtration apparatus which employs a scraper 24, receptacle (trough) 26, and washing nozzles 25, to remove filter cake, catch it, and wash the filter medium 15, respectively (all shown in figure 1). In view of this disclosure, it would have been obvious to one of ordinary ~~skill~~ skill in the art at the time th

invention was made, to modify the apparatus of the references as applied above by incorporating a scraper, receptacle, and spray nozzles as disclosed in order to efficiently remove filter cake. With respect to claim 7, the point where the scraper is connected is considered an obvious matter of choice in design to one skilled in the art since the scraper would perform the same function in substantially the same way, no matter where it was located. As such, claim 7 is considered patentably indistinguishable from the references as applied above.

V. Claims 10-11 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson as applied to claims 1-3 and 8-9 above, and further in view of Lee.

Claim 10 differs from the references as applied above by specifying that the "side edges of said permanent filter media belt are coated."

Claim 11 further specifies the coating to be "urethane plastic impregnated into the porous material of said side edges."

Lee discloses the sealing of the edge portions of filters of this type with rubber (col. 1, lines 25-36). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of the references as applied above by applying a suitable impervious material such as poly-urethane, the modern day counterpart of rubber, to the edge of the filter belt in order to seal it.

VI. Applicant's arguments filed 8/23/93 have been fully considered but they are not deemed to be persuasive.

Applicant argues , "that the conveyors of Estabrook and Anderson are not themselves filter media and are not constituted by a woven fabric material." The Cambridge belt disclosed could certainly function as a filter, serving to remove larger particles greater than a half inch in diameter. The woven fabric issue has been addressed in the body of the rejection.

Applicant next argues that , "Anderson is additionally different from Estabrook and Bratten inasmuch as the conveyor belt provides the perforated plate support

during the filtering action ..." Here it is unclear what Applicant means. It appears that Anderson does not have a perforated plate. If he did, the use of the term "comprising" as the transitional phrase does not exclude other components.

Applicant next argues that there would be no suggestion to one of ordinary skill in the art to add an underlying conveyor consisting of a powered Cambridge belt since it would be entirely redundant and potentially lead to synchronization problems. This is not seen to be the case, as on skilled in the art could synchronize the two drive means, and by using two, both drives would bear less of a work load and therefore last longer with less breakdowns. Furthermore, the filter belt would wear less.

The significance of the Galletti patent is not seen, since there are many differences between it and the instant claimed invention. There is no disposable media and the filter belt is not recirculated to and beneath the tank. The Galletti patent is not used in the rejection above.

With respect to the rejection of claims 4-7 Applicant simply argues "Ishigaki is concerned with a different filter arrangement and hence does not supply the teaching of the improved result achieved in the Bratten chain conveyor type filters". It is unclear what Applicant intends by the recitation "a different filter arrangement" since the Examiner certainly views the Ishigaki reference as analogous art. Here the Ishigaki reference was merely used to show some of the well known ways filter belts are cleaned, namely by scraper and collection trough, wash jet means, etc.

VII. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R.Popovics whose telephone number is (703) 308-0684.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

RJP
10/27/93

rjp
October 27,1993

STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
ART UNIT 138